

**UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

ACQIS LLC,  
a Texas limited liability company,

Plaintiff,

v.

WISTRON CORPORATION, a Taiwan  
Corporation, and WIWYNN  
CORPORATION, a Taiwan corporation,

Defendants.

**Civil Action No. 6:20-CV-00968**

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff ACQIS LLC (“Plaintiff” or “ACQIS”), by its attorneys, hereby alleges patent infringement against Defendants Wistron Corporation and Wiwynn Corporation (“Defendants” or “Wiwynn”) as follows:

**INTRODUCTION**

1. This is an action for patent infringement under the United States Patent Laws, 35 U.S.C. § 1 *et seq.* Beginning in the late 1990s, Dr. William Chu founded ACQIS and invented a variety of pioneering computer technologies that employed serial transmission along low voltage differential signal (LVDS) channels to dramatically increase the speed at which data can be transmitted while also reducing power consumption and noise. Dr. Chu’s inventions have become foundational in the computer industry, and are found in a variety of data transmission systems, including PCI Express (PCIe) and/or USB 3.x<sup>1</sup> transactions.

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<sup>1</sup> As used herein, “USB 3.x” refers to USB 3.0 and subsequent versions, including USB 3.1, USB 3.2, and any other subsequent versions.

2. Wiwynn has infringed and continues to infringe, directly and/or indirectly, the following patents owned by ACQIS: U.S. Patent Nos. 9,529,768 (“768 patent”), 9,703,750 (“750 patent”), 8,977,797 (“797 patent”), 8,041,873 (“873 patent”), RE44,468 (“468 patent”), RE44,654 (“654 patent”), RE46,947 (“947 patent”), and 7,676,624 (“624 patent”) (collectively, the “ACQIS Patents”). Copies of the ACQIS Patents are attached to this Complaint as **Exhibits 1-8**.

3. Specifically, Wiwynn has directly and/or indirectly infringed and continues to infringe the ACQIS Patents through: (1) the manufacture, use, offering for sale, and/or sale in the United States, and/or the importation into the United States, of infringing computer products; (2) the practice of claimed methods of the ACQIS Patents by using and/or testing computer products in the United States; (3) the importation into the United States of computer products made abroad using ACQIS’s patented processes; and (4) the inducement of third parties to engage in, and/or contributing to the engagement of third parties in, the activity described above with knowledge of the ACQIS Patents and of the third parties’ infringing actions.

4. ACQIS seeks damages and other relief for Wiwynn’s infringement of the ACQIS Patents. ACQIS is entitled to past damages because, without limitation, it has provided actual notice to Wiwynn and for method claims which do not require marking.

## **THE PARTIES**

5. Plaintiff ACQIS LLC, is a limited liability company organized and existing under the laws of the State of Texas, with offices at 411 Interchange Street, McKinney, Texas 75071. A related entity, ACQIS Technology, Inc., is a corporation organized under the laws of the State of Delaware, having its principal place of business at 1503 Grant Road, Suite 100, Mountain View, California 94040. ACQIS LLC is operated from California, where its President, Dr. William Chu, resides. Dr. Chu is also the Chief Executive Officer of ACQIS Technology, Inc.

6. Defendant Wistron Corporation is a Taiwan corporation located at No. 158 Singshan Rd. Neihu, Taipei, Taipei City, TW-11469, Taiwan, R.O.C.

7. Defendant Wiwynn Corporation is a Taiwan corporation and a subsidiary of Wistron Corporation with its global headquarters located at 23F, 110, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221-02, Taiwan, R.O.C. and a place of business at 8F, 90, Sec. 1, Xintai 5th Rd. Xizhi Dist., New Taipei City, New Taipei City, TW-22102, Taiwan, R.O.C.

8. Wiwynn has a distribution chain (together with Wiwynn subsidiaries, affiliates, and intermediaries) with respect to the manufacture, use, offering to sell, and/or sale of infringing computer products and with respect to the importation into the United States of infringing computer products and of computer products made abroad using patented processes claimed in the ACQIS Patents.

## **JURISDICTION AND VENUE**

9. This is an action for patent infringement under the United States patent laws, 35 U.S.C. § 101 *et seq.*

10. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has personal jurisdiction over Defendants consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long Arm Statute. On information and belief, Defendants have purposefully manufactured and/or distributed computer products that infringe the ACQIS Patents, or that were made abroad using patented processes claimed in the ACQIS Patents, through established distribution channels with the expectation that those products would be sold in the United States, State of Texas, and in this District. Further, Defendants have (themselves and/or through the activities of subsidiaries, affiliates, or intermediaries) committed and continue to commit acts of patent infringement in the United States, State of Texas and this District, including by making, using, offering to sell, and/or selling infringing computer products in

the United States, State of Texas and this District; importing infringing computer products and/or computer products made abroad using ACQIS's patented processes into the United States for sale in the State of Texas and this District; and/or inducing others to commit acts of patent infringement in the United States, State of Texas and this District. Accordingly, Wiwynn has established minimum contacts within Texas and purposefully availed itself of the benefits of Texas, and the exercise of personal jurisdiction over Wiwynn would not offend traditional notions of fair play and substantial justice. In addition, or in the alternative, this Court has personal jurisdiction over Wiwynn pursuant to Federal Rule of Civil Procedure 4(k)(2).

12. Wiwynn conducts business in the United States, the State of Texas and this District through subsidiaries, affiliates, and intermediaries, including subsidiary Wiwynn International Corporation, which is located in this District at 9360 Plaza Circle, El Paso, Texas 79917. Wiwynn International Corporation distributes Wiwynn electronics products. *See* [https://www.wiwynn.com/static/csr/2019-csr-report/web/en/2019\\_wiwynn\\_csr\\_en.html#p=37](https://www.wiwynn.com/static/csr/2019-csr-report/web/en/2019_wiwynn_csr_en.html#p=37).

13. Venue is proper in this District pursuant to 28 U.S.C. § 1391(c)(3) because Defendants do not reside in the United States and thus may be sued in any judicial district in the United States.

## **FACTUAL BACKGROUND**

### **Dr. Chu and the ACQIS Patents**

14. Dr. William Chu has been a prolific innovator in the computing industry since the 1970s.

15. In 1976, Dr. Chu received his Ph.D. in Electrical Engineering from the University of California, Berkeley.

16. Dr. Chu then began working in semiconductor design for American Microsystems, Inc. from 1976 to 1977, and then for Zilog, Inc. from 1977 to 1982.

17. In 1982, Dr. Chu founded Verticom, Inc., which developed innovative technologies relating to video transmission over telephone lines. Verticom also developed graphics products for the PC computer-aided design (CAD) market. Verticom's success resulted in its stock being listed on the NASDAQ exchange in 1987. In 1988, Verticom was acquired by Western Digital Imaging, Inc.

18. Dr. Chu served as Vice President of Engineering for Western Digital from 1988 to 1991, overseeing a development team in the desktop and portable graphics chip division. In the course of his work at Western Digital, Dr. Chu in 1988 started the company's portable graphics chip business, which became #1 in the portable graphics chip market by 1991. Dr. Chu also led Western Digital to achieve the #1 market share in the PC graphics market in 1990.

19. After Western Digital, Dr. Chu worked for Acumos, Inc. from 1991 to 1992 as a Vice President managing engineering for computer graphics chip development. Acumos was acquired by Cirrus Logic, Inc. in 1992.

20. Dr. Chu then worked for Cirrus Logic from 1992 to 1997, first as a General Manager in the Desktop Graphics Division and later as Co-President of the Graphics Chip Business Unit. During Dr. Chu's time at Cirrus Logic, the company achieved #1 market share in the PC graphics chip market.

21. In 1998, Dr. Chu founded ACQIS Technology, Inc. to pursue his vision of developing a small, portable computer module that could be interchangeably connected with a variety of different peripheral consoles. In the course of this development effort, Dr. Chu recognized the need for a better interconnection between the core computing module and a peripheral console. Such interconnections traditionally conveyed peripheral component interconnect (PCI) bus transactions in parallel using a large number of signal channels and connector pins. This made it difficult to employ LVDS channels, which are more "cable friendly," consume less power, and generate less noise. Dr. Chu wanted to develop an interconnection system that was scalable, used connectors with low pin counts, was

power-efficient, high performing, and easily extendible for future computing needs and technologies. This development work resulted in a large family of patents now owned by ACQIS, which disclose and claim a variety of pioneering inventions relating to improved, high-performance and low power consuming interconnection technologies for computer modules.

22. After several decades in the industry, Dr. Chu is now a named inventor of approximately forty-one (41) U.S. Patents.

23. Among the patent portfolio covering Dr. Chu's inventions and owned by ACQIS are the ACQIS Patents asserted in this case.

24. The '768 patent, entitled "Computer System Including CPU or Peripheral Bridge Directly Connected to a Low Voltage Differential Signal Channel that Communicates Serial Bits of a Peripheral Component Interconnect Bus Transaction in Opposite Directions," was duly and legally issued on December 27, 2016, from a patent application filed March 13, 2014, with William W.Y. Chu as the sole named inventor. The '768 patent claims priority to U.S. Provisional Patent Application No. 60/134,122, filed on May 14, 1999.

25. The '750 patent, entitled "Computer System Including CPU or Peripheral Bridge Directly Connected to a Low Voltage Differential Signal Channel that Communicates Serial Bits of a Peripheral Component Interconnect Bus Transaction in Opposite Directions," was duly and legally issued on July 11, 2017, from a patent application filed October 9, 2014, with William W.Y. Chu as the sole named inventor. The '750 patent claims priority to U.S. Provisional Patent Application No. 60/134,122, filed on May 14, 1999.

26. The '797 patent, entitled "Method of Improving Peripheral Component Interface Communications Utilizing a Low Voltage Differential Signal Channel," was duly and legally issued on March 10, 2015, from a patent application filed October 10, 2012, with William W.Y. Chu as the

sole named inventor. The '797 patent claims priority to U.S. Provisional Patent Application No. 60/134,122, filed on May 14, 1999.

27. The '873 patent, entitled "Multiple Module Computer System and Method Including Differential Signal Channel Comprising Unidirectional Serial Bit Channels to Transmit Encoded Peripheral Component Interconnect Bus Transaction Data," was duly and legally issued on October 18, 2011, from a patent application filed July 16, 2009, with William W.Y. Chu as the sole named inventor. The '873 patent claims priority to U.S. Provisional Patent Application No. 60/134,122, filed on May 14, 1999.

28. The '468 patent, entitled "Data Security Method and Device for Computer Modules," was duly and legally issued on August 27, 2013, from a reissue application filed July 30, 2012, with William W.Y. Chu as the sole named inventor. The '468 patent is a reissue of U.S. Patent No. 6,643,777, which issued on November 4, 2003, from a patent application filed May 14, 1999. The '468 patent claims priority to U.S. Patent Application No. 09/312,199, filed on May 14, 1999.

29. The '654 patent, entitled "Data Security Method and Device for Computer Modules," was duly and legally issued on December 17, 2013, from a reissue application filed October 10, 2012, with William W.Y. Chu as the sole named inventor. The '654 patent is a reissue of U.S. Patent No. 6,643,777, which issued on November 4, 2003, from a patent application filed May 14, 1999. The '654 patent claims priority to U.S. Patent Application No. 09/312,199, filed on May 14, 1999.

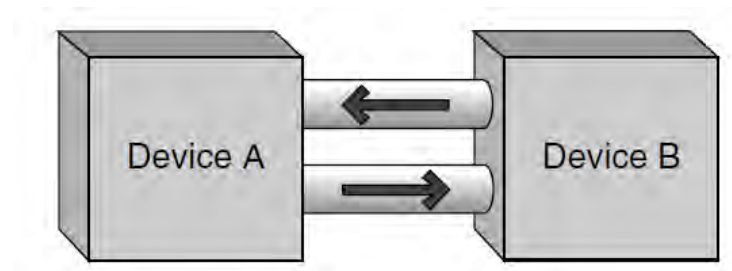
30. The '947 patent, entitled "Data Security Method and Device for Computer Modules," was duly and legally issued on July 10, 2018, from a reissue application filed November 22, 2013, with William W.Y. Chu as the sole named inventor. The '947 patent is a reissue of U.S. Patent No. 6,643,777, which issued on November 4, 2003, from a patent application filed May 14, 1999. The '654 patent claims priority to U.S. Patent Application No. 09/312,199, filed on May 14, 1999.

31. The '624 patent, entitled "Multiple Module Computer System and Method Including Differential Signal Channel Comprising Unidirectional [sic] Serial Bit Channels," was duly and legally issued on March 9, 2010, from a patent application filed March 18, 2008, with William W.Y. Chu as the sole named inventor. The '624 patent claims priority to U.S. Provisional Patent Application No. 60/134,122, filed on May 14, 1999.

32. The inventions claimed in the ACQIS Patents enable computers to operate faster with better efficiency through faster interconnections including between the core computing power modules and any connected consoles.

33. The claims in the ACQIS Patents generally relate to computers and computer systems that employ CPUs coupled to LVDS channels that convey various types of data (*e.g.*, PCI bus transactions, USB 3.x data, and/or digital video data) in a serial bit stream using pairs of unidirectional channels to convey the data in opposite directions.

34. Over the years, Dr. Chu's inventive developments have become more and more widely used in computing technologies. One prime example is the computing industry's adoption of PCI Express, which post-dates Dr. Chu's inventions but embodies Dr. Chu's patented interconnection invention by using "high speed, low voltage, differential serial pathway for two devices ... to communicate simultaneously by implementing dual unidirectional paths between two devices[.]"

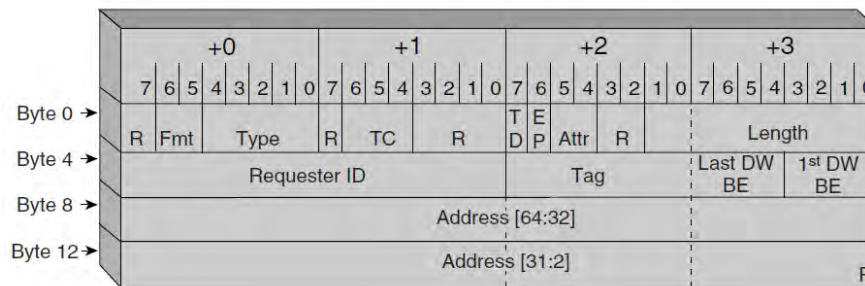


*See Introduction to PCI Express – A Hardware and Software Developers Guide*, Intel Press (2003), at 1-2 ("There are certain times in the evolution of technology that serve as inflection points that forever change the course of events. For the computing sector and communications, the adoption of



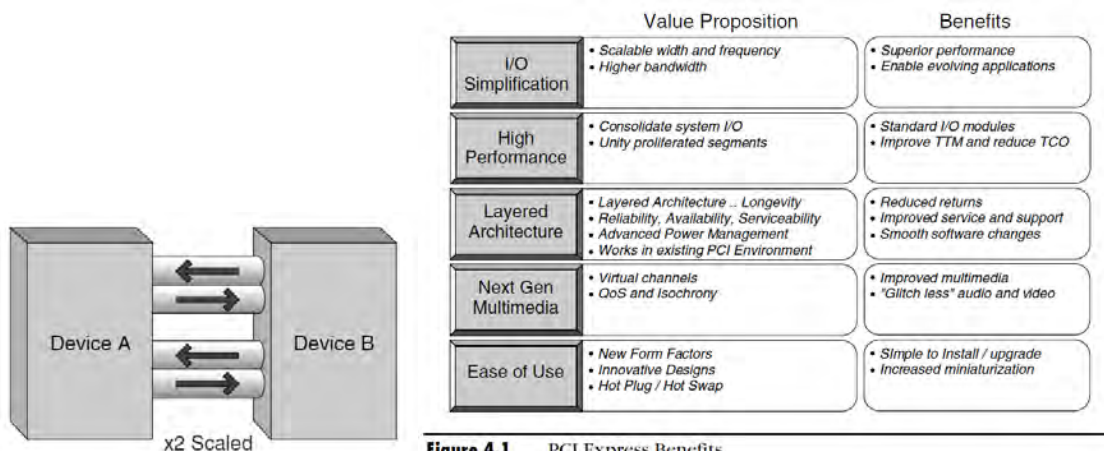
PCI Express, a groundbreaking new general input/output architecture, will serve as one of these inflection points.”).

35. PCI Express connections transmit data packets known as transaction layer packets (TLP) that include data bits, address bits, and byte enable (BE) information bits.



*Id.* at 93-114.

36. In sum, PCI Express connections are LVDS channels that convey data bits, address bits, and byte enable information bits of a PCI bus transaction in a serial bit stream using pairs of unidirectional, differential signal lanes to convey the information in opposite directions, allowing the connection to be scalable and dramatically reducing the pin-count required for connectors, as well as other benefits. “Currently PCI Express defines the following configuration of serial links: x1, x2, x4, x8, x12, x16, and x32. ... An x2 configuration indicates two serial paths to and from a device[.]”



**Figure 4.1** PCI Express Benefits

*Id.* at 3, 50.

37. Another example of a computer-to-peripheral interconnection that embodies Dr. Chu's patented invention is the USB 3.x connection. The "Super Speed" USB 3.0 architecture uses at least two pairs of unidirectional, point-to-point differential signal paths. Each pair includes a transmit path and a receiving path, thus transmitting the USB data packet information in opposite directions.

**3.1.4 USB 3.0 Architecture Summary**

USB 3.0 is a dual-bus architecture that incorporates USB 2.0 and a SuperSpeed bus. Table 3-1 summarizes the key architectural differences between SuperSpeed USB and USB 2.0.

**Table 3-1. Comparing SuperSpeed to USB 2.0**

Characteristic	SuperSpeed USB	USB 2.0
Data Rate	SuperSpeed (5.0 Gbps)	low-speed (1.5 Mbps), full-speed (12 Mbps), and high-speed (480 Mbps)
Data Interface	Dual-simplex, four-wire differential signaling separate from USB 2.0 signaling Simultaneous bi-directional data flows	Half-duplex two-wire differential signaling Unidirectional data flow with negotiated directional bus transitions
Cable signal count	Six: Four for SuperSpeed data path Two for non-SuperSpeed data path	Two: Two for low-speed/full-speed/high-speed data path
Bus transaction protocol	Host directed, asynchronous traffic flow Packet traffic is explicitly routed	Host directed, polled traffic flow Packet traffic is broadcast to all devices.

*Universal Serial Bus 3.0 Specification*, Rev. 1.0 (Nov. 12, 2008), at 3-1 to 3.5. In sum, USB 3.x connections are LVDS channels using two unidirectional, differential signal pairs that transmit USB protocol data packets in opposite directions.

38. Intel's Direct Media Interface (DMI) channel is similar to PCIe and implements four serial lanes that all use differential signaling constituting 2 transmit lanes and 2 receive lanes and, therefore, transmitting data in opposite directions. *See* <https://www.intel.com/content/dam/www/public/us/en/documents/white-papers/ia-introduction-basics-paper.pdf>. *See also* [https://en.wikipedia.org/wiki/Direct\\_Media\\_Interface](https://en.wikipedia.org/wiki/Direct_Media_Interface) ("DMI shares many characteristics with PCI Express, using multiple lanes and differential signaling to form a point-to-point link.").

39. Each claim of the ACQIS Patents is a patentable, valid, and enforceable invention that is novel and non-obvious over the prior art.

40. ACQIS has not authorized or licensed Wiwynn to practice any of the inventions claimed in the ACQIS Patents.

**Wiwynn's Infringing Products**

41. Wiwynn touts itself as an innovative cloud IT infrastructure provider of high quality computing and storage products, plus rack solutions for leading data centers. Wiwynn imports infringing servers, and servers made using infringing processes, into the United States through established distribution channels with the expectation that those products would be sold in the United States, State of Texas and this District.

42. According to its website, Wiwynn's sale of servers and related accessories generates millions of dollars in revenue every year, growing from \$10,803,428 in 2015 to \$163,600,423 in 2019.

43. Wiwynn has directly infringed, and continues to infringe, one or more claims of each of the ACQIS Patents under at least 35 U.S.C. §§ 271(a) and (g), by making, using, offering to sell, and/or selling within the United States, and/or importing into the United States computer products that embody the claimed inventions of Dr. Chu, and by importing into the United States computer products that were made abroad using patented processes claimed in the ACQIS Patents.

44. Wiwynn makes, uses, imports, and sells a variety of server products in the United States that infringe one or more of the claims in the ACQIS Patents, and/or imports into the United States server products that were made abroad using patented processes claimed in the ACQIS Patents, including without limitation servers and related accessories sold under the brand names OCP, WiRack 19 and WiRack 21 Server. The Accused Servers fall into one of two categories. Some of the Accused Servers are configured and operate in substantially the same way as explained below using the WiRack 19 Server SV302G3 Series server as an example for illustrative purposes. These include, without limitation:

- WiRack 19 GPU Server SV500G3;
- WiRack 19 Server SV302G3 Series, including, but not limited to, SV302G3-I and SV302G3-C;
- WiRack 19 Server SV300G3 Series, including, but not limited to, SV300G3 and SV300G3-N;
- WiRack21 Server SV7221G2 Series, including, but not limited to, SV7221G2-S, SV7221G2-V, and SV7221G2-P; and
- WiRack21 Server SV7220G3 Series, including, but not limited to, SV7220G3-V, SV7220G3-V<sup>+</sup>, and SV7220G3-S.

45. Likewise, as shown further below, other Accused Servers are configured and operate in substantially the same way as the WiRack21 Storage ST7000G2/SV7000G2 Series server as an example for illustrative purposes. The products described in this paragraph are collectively referred to as the “Accused Servers.”

46. The Accused Servers that Wiwynn imports into the United States are manufactured outside the United States using one or more processes claimed in the ACQIS Patents.

47. The Accused Servers include products made, used, offered for sale, sold within the United States, and/or imported into the United States at least since ACQIS provided Wiwynn with actual notice of its infringement on or around July 17, 2018.

48. The Accused Servers also include products made using the processes claimed in the ACQIS Patents and imported into the United States within the six years preceding the date of this Complaint.

49. The Accused Servers also include products that are used to perform one or more methods claimed in the ACQIS Patents within the six years preceding the date of this Complaint.

### ***The Accused Servers***

50. The WiRack 19 Server SV302G3 Series is a modular computer system that can run on various server operating systems.



<https://www.wiwynn.com/products/19-inch/sv302g3-i/>

## **What I Infer as 4 Fundamental Attributes of Modular Architecture**

My friend loves to read the last chapter of a book first. This she tells me, allows her to understand how the author ties the knots together and if they are interesting, she then goes through the other chapters.

While personally I like to read the books in a linear fashion, I do see the merits in this non-linear reading pattern. One obvious reason to her of course is that if the ending is not to her liking then she quickly browses through the book and gets it done with. Now applying that method to this blog, it would be interesting to clearly visualize the end state of what we would like to achieve if an ideal modular architecture is implemented. We can use that clear goal to chart the path and the steps that need to be taken along that towards that destination.

Applying such an approach to this blog, the one quintessential query that if answered encapsulates that reason for a change to modularity would be:

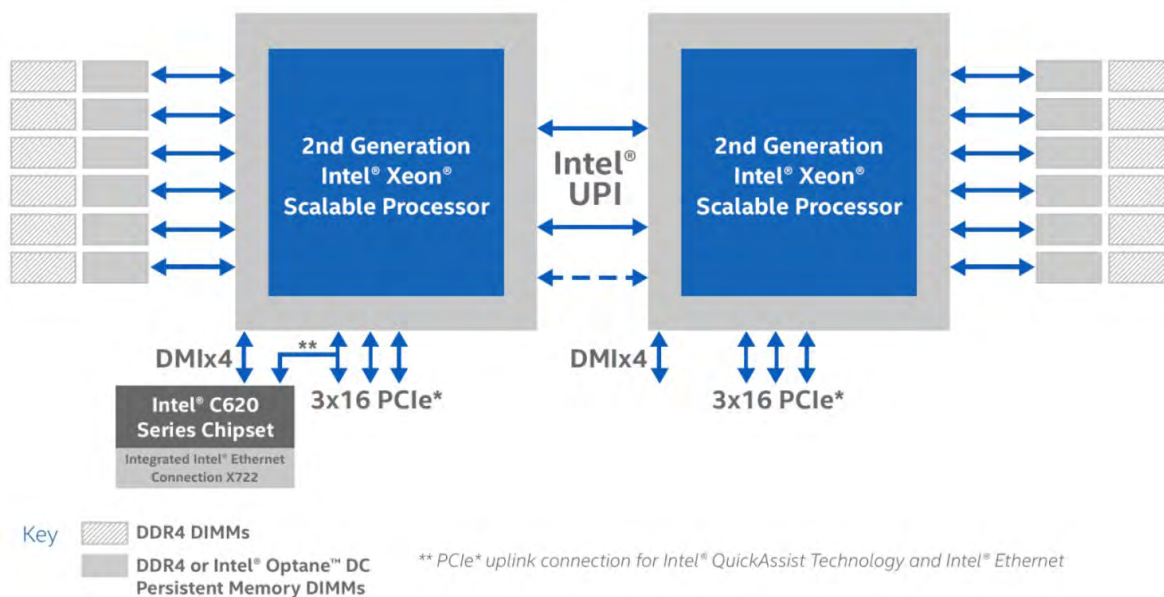
*"What benefits do we want for ourselves and for our customers with a modular architecture?"*

<https://www.wiwynn.com/technical-column/what-i-infer-as-4-fundamental-attributes-of-modular-architecture/>

51. The WiRack 19 Server SV302G3 Series uses Intel® Xeon® Scalable Processors / Next Generation Intel® Xeon® Scalable Processors, which have integrated interface controllers on a single chip to drive the PCIe channels connected to the processor.

Processor	Intel® Xeon® Scalable Processors / Next Generation Intel® Xeon® Scalable Processors
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<https://www.wiwynn.com/products/19-inch/sv302g3-i/>






<https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html>

52. The WiRack 19 Server SV302G3 Series includes a variety of connectors that can couple the CPU to a console:





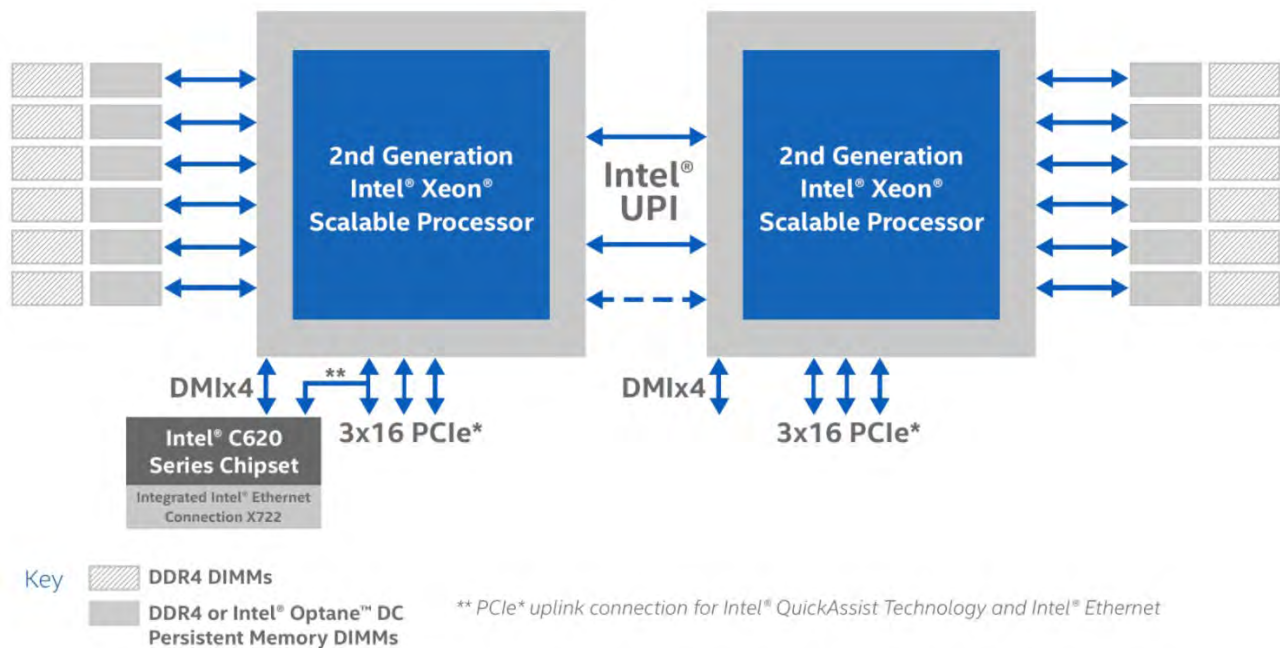
NVMe SSD	CPU Count	OCP NIC x16	PCIe 3.0 x16 Slot	
8	4	4	0	<b>SV302G3-C</b> 
8	2	2	1	<b>SV302G3-S</b> 
4	4	4	2	<b>SV302G3-I</b> 

## Chassis Specification

PSU	2 x 800W/1300W (1+1), hot-swappable
Fan	6 dual-rotor hot-plug fans for 2 zones
Dimensions	448 (W) * 790 (D) * 43.5 (H) (mm)

<https://www.wiwynn.com/products/19-inch/sv302g3-i/>

53. The Intel processors employed in the WiRack 19 Server SV302G3 directly connect to a variety of LVDS channels that convey data bits in a serial stream using unidirectional pairs of lanes transmitting data in opposite direction, including Intel's DMI and PCIe channels.



<https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html>

54. The WiRack 19 Server SV302G3 comprises LVDS channels that convey USB data packets through pairs of unidirectional differential signal paths in opposite directions—USB 3.x ports.

Storage and I/O	
Front I/O	<ul style="list-style-type: none"> <li>• One Debug Port (USB 3.0 Type A CONN)</li> <li>• One USB 3.0 Type A CONN</li> <li>• One GbE RJ45 Port</li> <li>• One OCP NIC Port</li> <li>• Power/Reset button</li> </ul>

<https://www.wiwynn.com/products/19-inch/sv302g3-i/>

- Supports PCIe\*, USB, SATA\* and connects to Ethernet, SSD and FPGA peripherals

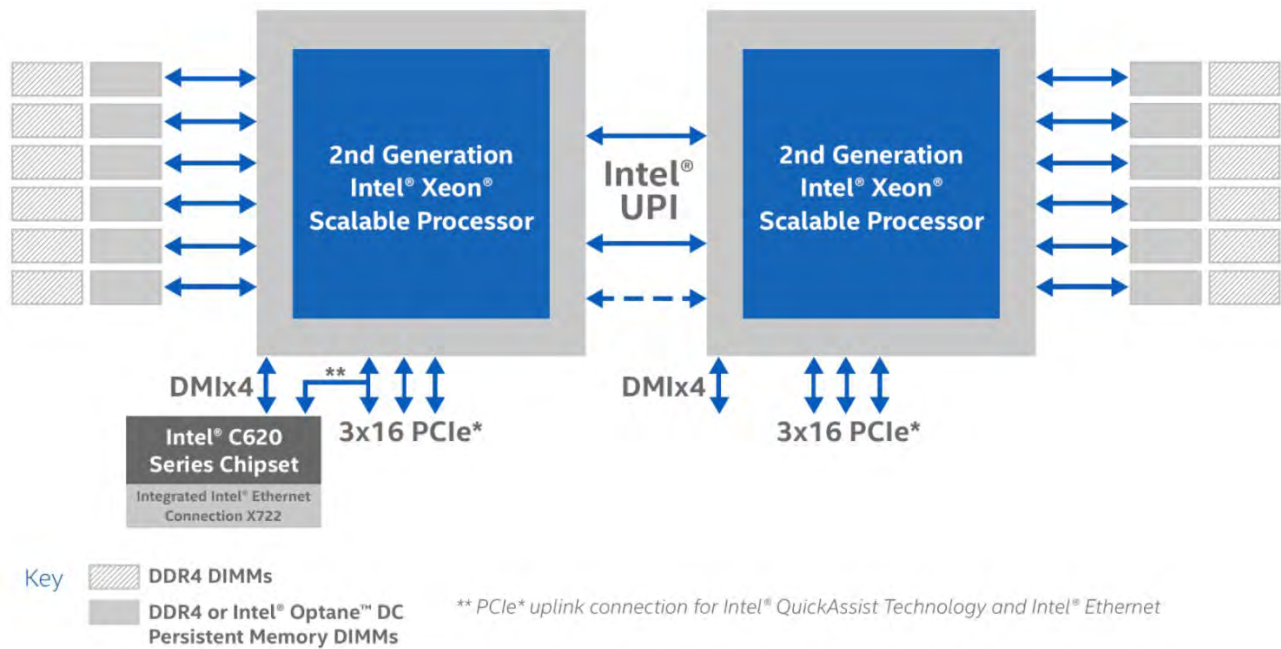
<https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html>

55. The WiRack 19 Server SV302G3 has system memory directly coupled to the CPU.

Memory	16 DIMM slots; DDR4 up to 2933 MT/s RDIMM/LRDIMM; Up to 1TB
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<https://www.wiwynn.com/products/19-inch/sv302g3-i/>





<https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html>

56. The WiRack 19 Server SV302G3 has a mass storage hard drive coupled to the CPU.

Storage	<ul style="list-style-type: none"> <li>• Four 2.5" U.2 NVMe SSD</li> <li>• One onboard 2280/21100 M.2 SSD Module slot</li> </ul>	<ul style="list-style-type: none"> <li>• Two 2.5" U.2 NVMe SSD</li> <li>• One onboard 2280/21100 M.2 SSD Module slot</li> </ul>
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<https://www.wiwynn.com/products/19-inch/sv302g3-i/>

- Supports PCIe\*, USB, SATA\* and connects to Ethernet, SSD and FPGA peripherals

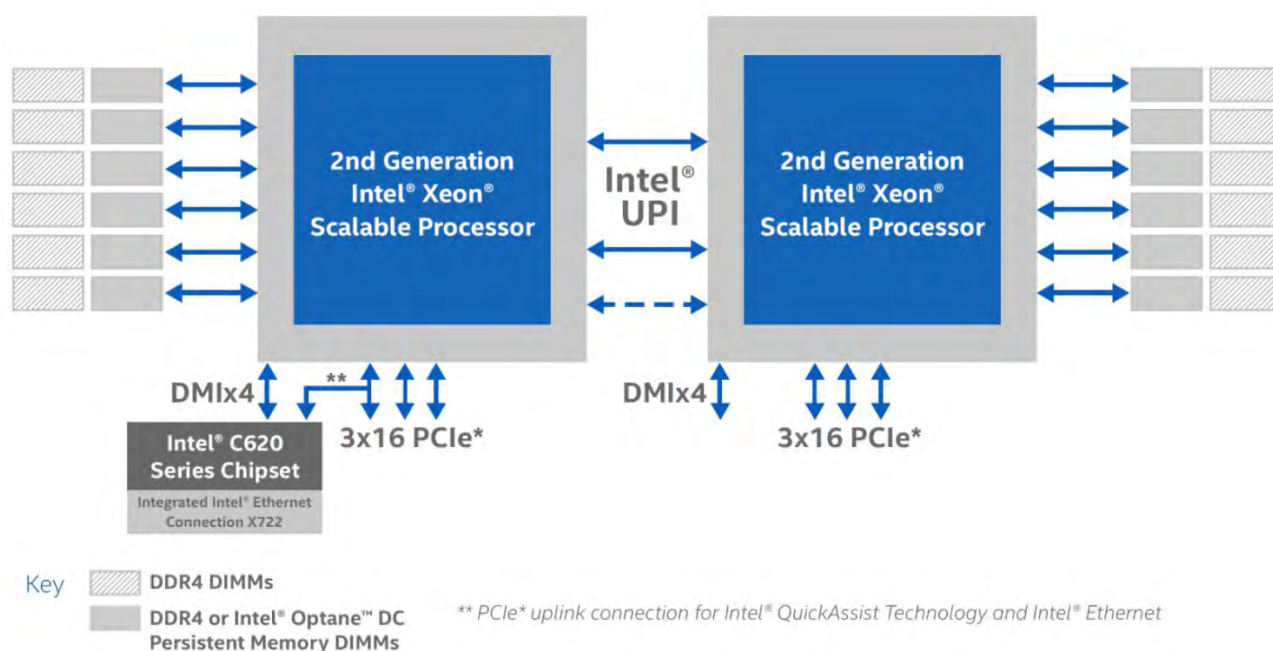
<https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html>

57. The Intel processors used in the WiRack 19 Server SV302G3 have a peripheral bridge called the C621 chipset PCH connected to the CPU via the DMI, which has an integrated controller. The C621 Chipset is part of the Intel C620 Series. See

<https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html> .



<https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html>



[https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html](https://www.intel.com/content/www/us/en/design/products-and-solutions/processors-and-chipsets/cascade-lake/2nd-gen-intel-xeon-scalable-processors.html)

The Intel Xeon Processor Scalable Family is the next generation of 64-bit, multi-core server processor built on 14-nm process technology. The processor supports up to 46 bits of physical address space and 48 bits of virtual address space. The processor is designed for a platform consisting of at least one Intel Xeon Scalable Family processor and the Platform Controller Hub (PCH). Included in this family of processors are integrated memory controller (IMC) and an Integrated I/O (IIO) on a single silicon die.

Intel® Xeon® Processor Scalable Family Datasheet, Vol. 1, p. 7 (May 2018 Doc. No. 336062-003).

The Intel® C620 Series Chipset PCH provides extensive I/O support. Functions and capabilities include:

- ACPI Power Management Logic Support, Revision 4.0a
- *PCI Express\* Base Specification*, Revision 3.0
- Integrated Serial ATA host controller, supports data transfer rates of up to 6 Gb/s on all ports.
- xHCI USB controller with SuperSpeed USB 3.0 ports
- Direct Media Interface
- Serial Peripheral Interface
- Enhanced Serial Peripheral Interface
- Flexible I/O—Allows some high speed I/O signals to be configured as PCIe\* root ports, PCIe uplink for use with certain PCH SKUs, SATA (and sSATA), or USB 3.0.

Intel® C620 Series Chipset Platform Controller Hub Datasheet, p. 34, 38 (May 2019 Doc. No. 336067-007US)

58. The Intel C621 PCH used in the WiRack 19 Server SV302G3 has an Integrated Clock Controller (ICC) that includes PLL circuitry, which generates different clock frequencies to convey the PCI bus transactions and USB transactions through the PCIe and USB channels based on the different clock frequencies.

Acronyms	Description
ICC	Integrated Clock Controller
LPC	Low Pin Count
PCH	Platform Controller Hub
PLL	Phase Locked Loop Circuit
SSC	Spread Spectrum Clocking

### Overview

This document describes the signals and different clocking modes that the Intel® C620 Series Chipset PCH supports. How you route the signals is the province of the appropriate platform PDG, as each platform can have different rules and restrictions on how the clocks are routed, connectivity, and modes supported.

Controls USB3Gen2PCIe PLL and its output clocks behavior. This offset is lockable by setting LOCK\_G2PLL bit (ICCSEC offset 1020h bit 10).

CLKOUT\_NSSCCAP[1:0] are a pair of 100 MHz differential clocks that can have spread spectrum enabled and disabled on them independently of the rest of the 100 MHz differential clocks. This can be done because these clocks are sourced from a different PLL than the rest of the 100 MHz clocks. One effect of this is that these clocks can not be used to drive the BCLK inputs on the CPU, drive clock inputs to PCIe slots/devices that connect to the CPU, or clocks inputs to PCIe slots/devices that connect to the PCH. They are best considered independent clocks that can be used by components that do not need them to be used for transferring data between the CPUs and the PCHs. For example, if you had a SAS controller on the board that needed 100 MHz non-spread clocks for transferring data between the controller and the hard drives, the CLKOUT\_NSSCCAP clocks could be used for this purpose.

The rest of the clocks (CLKOUT\_ITPXDP, CLKOUT\_PLAT[1:0], CLKOUT\_SRC\_N/P\_[15:0]) are all generated by the same PLL, and operate the same with regards to spread spectrum. SSC is either on for all these clocks, or off. The PLL for these clocks also provides the clocking for USB3. The USB3 specification requires SSC to be turned on with a certain range, resulting in these clocks all, by default, having spread spectrum enabled operating in that mode. It is possible to disable SSC on these clocks, but that will end up in non-compliance with the USB3 specification.

Intel® C620 Series Chipset Platform Controller Hub Datasheet, p. 98-116 (May 2019 Doc. No. 336067-007US).

59. The Intel Xeon Scalable processor used in the WiRack 19 Server SV302G3 also has integrated clock circuitry that includes PLL circuitry, which generates different clock frequencies to convey the PCI bus transactions through the PCIe channels based on the different clock frequencies.

Clock multiplying within the processor is provided by the internal phase locked loop (PLL), which requires a constant frequency BCLK{0/1/2}\_DP, BCLK{0/1/2}\_DN input, with exceptions for spread spectrum clocking. DC specifications for the BCLK{0/1/2}\_DP, BCLK{0/1/2}\_DN inputs are provided in [Section 2.8.3.7](#).

#### System Reference Clock (BCLK{0/1/2}) Signals

Signal Name	Description
BCLK{0,1,2}_DN/DP	Reference Clock Differential input. These pins provide the required reference inputs to various PLLs inside the processor, such as Intel UPI and PCIe. BCLK0, BCLK1 and BCLK2 run at 100 MHz from the same clock source.

Intel® Xeon® Processor Scalable Family Datasheet, Vol. 1, p. 15, 56 (May 2018 Doc. No. 336062-003)



60. The WiRack 19 Server SV302G3 can, for example and without limitation, be combined with the WiRack 19 SR2000G2 Series rack:



### Power and Management Distribution Unit (PMDU) and Power Efficiency Design

PMDU allows system to be configured, mixed and match on demands. When SV5100G3 and SV5200G3 server sleds are inserted in the rack, they are blindly mate up with the PMDU which provides power. SR2000G2 provides better efficiency by delivering three phase power to each individual server, which is 97% efficient and only have 3% conversion lost. In addition, it provides phase balancing to each server depends on different workloads.

<https://www.wiwynn.com/products/19-inch/sr2000g2/>

61. WiRack21 Storage ST7000G2/SV7000G2 Series is a modular computer system that can run on various server operating systems.



<https://www.wiwynn.com/products/21-inch/st7000g2/>

## What I Infer as 4 Fundamental Attributes of Modular Architecture

My friend loves to read the last chapter of a book first. This she tells me, allows her to understand how the author ties the knots together and if they are interesting, she then goes through the other chapters.

While personally I like to read the books in a linear fashion, I do see the merits in this non-linear reading pattern. One obvious reason to her of course is that if the ending is not to her liking then she quickly browses through the book and gets it done with. Now applying that method to this blog, it would be interesting to clearly visualize the end state of what we would like to achieve if an ideal modular architecture is implemented. We can use that clear goal to chart the path and the steps that need to be taken along that towards that destination.

Applying such an approach to this blog, the one quintessential query that if answered encapsulates that reason for a change to modularity would be:

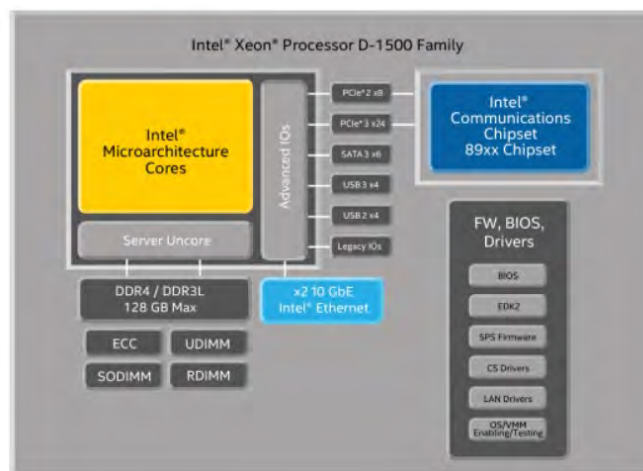
*"What benefits do we want for ourselves and for our customers with a modular architecture?"*

<https://www.wiwynn.com/technical-column/what-i-infer-as-4-fundamental-attributes-of-modular-architecture/>

62. The WiRack21 Storage ST7000G2/SV7000G2 Series uses Intel® Xeon® Broadwell-DE processors, which have integrated interface controllers on a single chip to drive the PCIe channels connected to the processor. The Intel® Xeon® Broadwell-DE is now known as the Intel® Xeon® processor D-1500. See <https://www.intel.com/content/www/us/en/embedded/products/broadwell-de/overview.html>



<https://www.wiwynn.com/products/21-inch/st7000g2/>



<https://www.intel.com/content/www/us/en/embedded/products/broadwell-de/specifications.html>

63. The WiRack21 Storage ST7000G2/SV7000G2 Series includes a variety of connectors that can couple the CPU to a console.

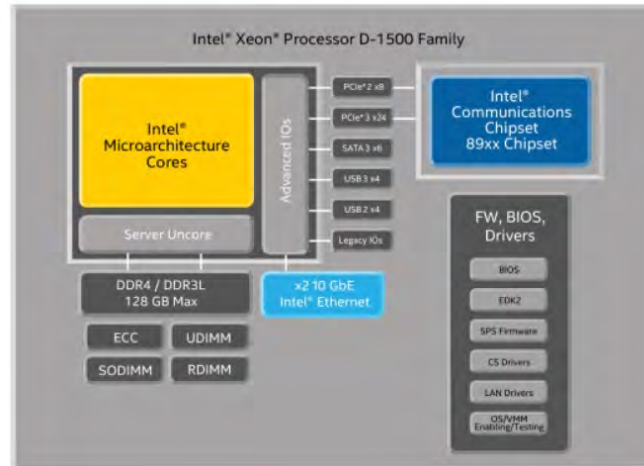


#### Power Supply and Physical Specifications

Power Supply	Centralized 12.5 V DC bus bar
Form Factor and Dimensions	4 OU Rack; 4U; 185 (H) x 537 (W) x 879 (D)

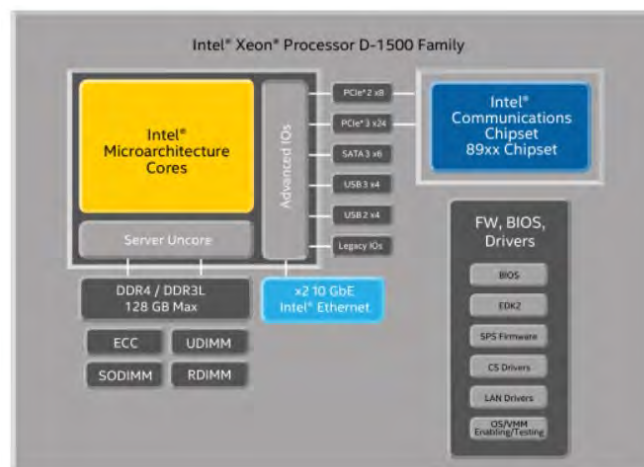
<https://www.wiwynn.com/products/21-inch/st7000g2/>

64. The Intel processors employed in the WiRack21 Storage ST7000G2/SV7000G2 Series connect directly to a variety of LVDS channels that convey data bits in a serial stream using unidirectional pairs of lanes transmitting data in opposite directions, including Intel's PCIe channels.



<https://www.intel.com/content/www/us/en/embedded/products/broadwell-de/specifications.html>

65. The Intel processors employed in the WiRack21 Storage ST7000G2/SV7000G2 Series also connect to LVDS channels that convey USB data packets through pairs of unidirectional differential signal paths in opposite directions—USB 3.x ports.



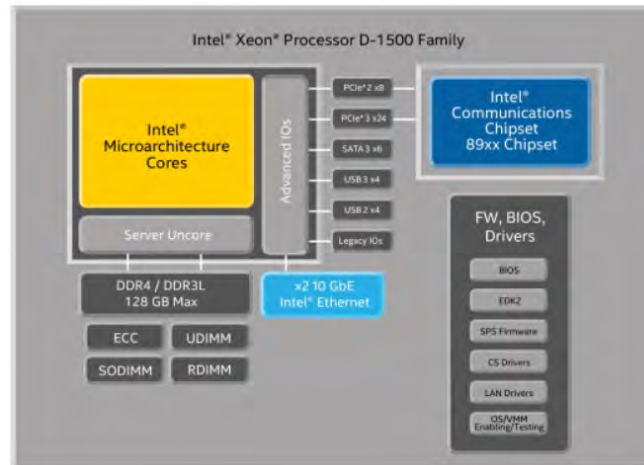
<https://www.intel.com/content/www/us/en/embedded/products/broadwell-de/specifications.html>



66. The WiRack21 Storage ST7000G2/SV7000G2 Series has system memory directly coupled to the CPU.

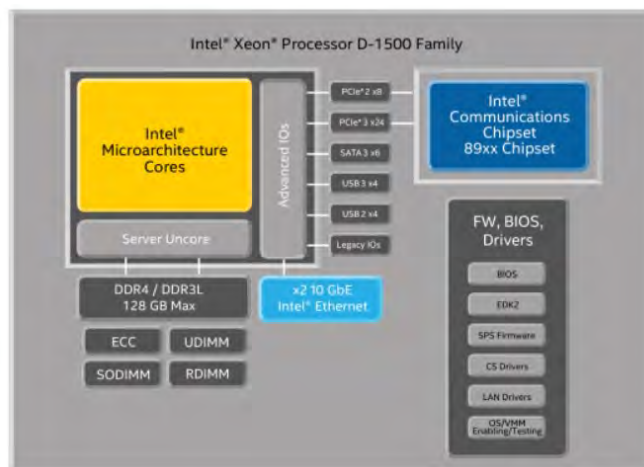
Memory	DDR4 x 8 (4 per server), up to 2400MT/s	DDR4 x 4, up to 2400MT/s
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<https://www.wiwynn.com/products/21-inch/st7000g2/>



<https://www.intel.com/content/www/us/en/embedded/products/broadwell-de/specifications.html>

67. The WiRack21 Storage ST7000G2/SV7000G2 Series has a mass storage hard drive coupled to the CPU.



<https://www.intel.com/content/www/us/en/embedded/products/broadwell-de/specifications.html>

## Storage

72 3.5" hot-plug drive bay

<https://www.wiwynn.com/products/21-inch/st7000g2/>

68. The Intel® Xeon® Broadwell-DE processors used in the WiRack21 Storage ST7000G2/SV7000G2 Series have an Integrated Clock Controller (ICC) that includes PLL circuitry, which generates different clock frequencies to convey the PCI bus transactions and USB transactions through the PCIe and USB channels based on the different clock frequencies.

### Integrated Clock Controller

Intel® Xeon® Processor D-1500 Product Family contains an Integrated Clock Controller (ICC) that generates various platform clocks from a 25 MHz crystal source. The ICC contains PLLs, Modulators, and Dividers for generating various clocks suited to the platform needs. The ICC supplies up to eight 100 MHz PCI Express 2.0 Specification compliant clocks, one 100 MHz PCI Express\* 3.0 Specification compliant clock for BCLK, two 100 MHz PCI Express 3.0 Specification compliant clocks for PEG slots, one 100 MHz PCI Express 3.0 Specification compliant clock for Intel® In-Target Probe (Intel® ITP) or a third PEG slot five 33 MHz PCI 2.3 Local Bus Specification compliant single-ended clocks for LPC/TPM devices and two Flex Clocks that can be configured to various frequencies that include 14.318 MHz, 33 MHz, and 24/48 MHz for use with SIO, TPM, EC, LPC, and any other legacy functions.

Intel® Xeon® Processor D-1500 Product Family Datasheet, Vol. 1, p. 31 (Nov. 2015 Doc. No. 332050-002)

## 1.2 Overview

Intel® Xeon® Processor D-1500 Product Family provides extensive I/O support. Functions and capabilities include:

- **PCI Express\* Base Specification**, Revision 2.0 support for up to eight ports with transfers up to 5 GT/s
- ACPI Power Management Logic Support, Revision 4.0a
- Enhanced DMA controller, interrupt controller, and timer functions
- Integrated Serial ATA host controllers with independent DMA operation on up to six ports
- xHCI USB controller provides support for up to 4 USB ports, of which four can be configured as SuperSpeed USB 3.0 ports.
- One legacy EHCI USB controller provides a USB debug port.
- Integrated 10/100/1000 Gigabit Ethernet MAC with System Defense
- **System Management Bus (SMBus) Specification**, Version 2.0 with additional support for I<sup>2</sup>C\* devices
- Supports Intel® Virtualization Technology for Directed I/O (Intel® VT-d)
- Supports Intel® Trusted Execution Technology (Intel® TXT)
- Integrated Clock Controller
- Low Pin Count (LPC) interface
- Firmware Hub (FWH) interface support
- Serial Peripheral Interface (SPI) support
- JTAG Boundary Scan support

Intel® Xeon® Processor D-1500 Product Family Datasheet, Vol. 1, p. 26 (Nov. 2015 Doc. No. 332050-002)

69. The WiRack21 Storage ST7000G2/SV7000G2 Series can, for example and without limitation, be combined with the WiRack 21 SR1000G2 Series rack:



### Open Rack Design for Best Power Efficiency

Wiwynn SR1200G2 has two centralized power shelves on rack instead of multiple power supply units in the server chassis. All nodes share these centralized power shelf, thus, providing higher energy efficiency while lowering capital costs. As a matter of fact, a data center full of vanity-free Wiwynn WiRack21 servers can be 38% more efficient.

<https://www.wiwynn.com/products/21-inch/sr1200g2/>

### **Wiwynn's Infringement**

70. In view of the foregoing facts concerning the technical features and functionalities of the Accused Servers (*see* ¶¶ 41-69), when Wiwynn manufactures the Accused Servers that include peripheral bridges, it necessarily improves the speed and performance of the peripheral data communication in its computer products by using a method of manufacturing that includes the following steps: (a) connecting a CPU directly to a peripheral bridge on a printed circuit board; (b) directly connecting to the peripheral bridge one or more LVDS channels with pairs of unidirectional lanes that convey data in serial bit streams in opposite directions; and (c) providing a connector with an LVDS channel to facilitate data communication with external peripherals using two unidirectional serial lanes to transmit data in opposite directions, including USB protocol data.

71. On information and belief, Wiwynn performs the foregoing manufacturing steps outside the United States to make the Accused Servers and then imports the Accused Servers into the United States to be marketed and sold.

72. Through making, using, selling, offering for sale, and importing the Accused Servers with the features and functionalities alleged above, Wiwynn has and continues to infringe one or more of the claims in each of the ACQIS Patents.

73. Wiwynn's infringing conduct has caused injury and damage to ACQIS and ACQIS' licensees, and will continue to cause additional severe and irreparable injury and damage to ACQIS and ACQIS' licensees unless enjoined by this Court.

***ACQIS Provided Wiwynn Actual Notice of its Infringement***

74. On or around July 17, 2018, ACQIS notified Wiwynn, pursuant to 35 U.S.C. § 287(a), of all of the ACQIS Patents and Wiwynn's infringement thereof based on the Accused Servers. Specifically, ACQIS' letter identified all of the ACQIS Patents asserted herein and described the applicability of the ACQIS Patents to the PCI Express, USB 3.0, and other computer interface technologies. ACQIS's letter specifically identified Wiwynn's various servers and related accessories, including the Accused Servers addressed herein as using ACQIS' patented technologies. ACQIS also described the enforcement history of ACQIS's patent portfolio, and specifically noted a prior lawsuit enforcing ACQIS patents related to the presently-asserted ACQIS Patents, which resulted in a significant jury verdict against IBM.

75. ACQIS invited Wiwynn to discuss potential licensing arrangements to allow Wiwynn to continue to utilize the patented technologies in the ACQIS patent portfolio, including the ACQIS Patents.

76. Wiwynn did not respond to ACQIS's July 17, 2018 letter and continues to make, import, and sell the Accused Servers identified in ACQIS's letter in willful violation of ACQIS' patent rights, or at the very least in reckless disregard of ACQIS' patent rights.

77. Upon receiving actual notice of the ACQIS Patents and how they apply to the Wiwynn's server products, Wiwynn at the very least ignored the notice and chose to remain willfully blind to its own infringement and the infringement that it was inducing others to commit through the use of the Accused Servers.

78. Wiwynn's choice to ignore ACQIS, the ACQIS Patents, and ACQIS' offer to engage in a licensing arrangement, and instead to continue making and selling the infringing Accused Servers, is egregious and exceptional.

79. Wiwynn's conduct constitutes willful infringement of the ACQIS Patents, beginning at least as early as July 17, 2018.

***Wiwynn's Indirect Infringement***

80. Wiwynn indirectly infringes the ACQIS Patents under 35 U.S.C. § 271(b) by inducing third parties, such as importers, resellers, customers, and end users, to directly infringe the ACQIS Patents by using, offering for sale, selling and/or importing the Accused Servers in this District and elsewhere in the United States and by importing and selling the Accused Servers despite knowledge that those products are material parts of a computer system, and are not staple articles of commerce with substantial non-infringing uses. For example, Accused Servers are offered for sale and sold in the United States by Wiwynn partners like Penguin Computing and Redapt.

81. Wiwynn took affirmative acts to induce third parties to commit those direct infringing acts. Wiwynn did so by, at least, actively promoting the Accused Servers for the U.S. market as available through partners in the U.S. listed on its website. For example, on information and belief, for the Accused Servers sold in the United States, Wiwynn pursues and obtains approval from U.S.

and state regulatory agencies to allow sales of such Accused Servers in the United States. Wiwynn competes for business in the United States. Wiwynn's website provides information for U.S. consumers of the Accused Servers by identifying U.S. offices among its "contact" information. Wiwynn also has an office in this District in El Paso. Wiwynn has taken these actions despite knowledge of the ACQIS Patents and the infringement by the Accused Servers, Wiwynn knows and specifically intends that its customers will sell the infringing Accused Servers in the United States or cause the Accused Servers to be sold in the United States.

82. Wiwynn's customers directly infringe the ACQIS Patents by importing the Accused Servers into the United States, offering to sell and selling the Accused Servers in the United States, and using the Accused Servers in the United States.

83. Wiwynn further induces direct infringement of the ACQIS Patents by providing instruction and direction to end users of the Accused Servers about how to use the Accused Servers in a manner that infringes one or more claims of the ACQIS Patents. Wiwynn knows and specifically intends that end users will use the Accused Servers in an infringing manner as directed by Wiwynn. On information and belief, Wiwynn has configured the Accused Servers in such a manner that direct infringing use necessarily occurs upon operation of the Accused Servers in their normal, intended manner without any specific action of the end user other than turning on the product.

84. Wiwynn has induced others' direct infringement as stated above despite actual notice that the Accused Servers infringe the ACQIS Patents, as set forth herein. Wiwynn therefore has caused its purchasers and end users to directly infringe the ACQIS Patents with knowledge of the ACQIS Patents and with the specific intent, or at the very least willful blindness, that the purchasers and end users will directly infringe. Wiwynn knew the acts it induced (like importation, U.S. sales, and use by its customers) constituted infringement.



85. Wiwynn contributorily infringes the ACQIS Patents under 35 U.S.C. § 271(c). Wiwynn knew about the ACQIS Patents prior to this complaint. Wiwynn's products are especially made or especially adapted for use that results in an infringement of the ACQIS Patents. Wiwynn's products include features that are not staple articles of commerce suitable for substantial non-infringing uses. Wiwynn's products are a material part of the invention of the ACQIS Patents. Wiwynn's products are also sold, offered for sale, and used in configurations that do not have substantial non-infringing uses. The intended, normal use of Wiwynn's servers and motherboards results in infringement of the ACQIS Patents.

86. Wiwynn's acts of indirect infringement as stated herein have caused injury and damage to ACQIS and ACQIS' licensees, and will continue to cause additional severe and irreparable injury and damage to ACQIS and ACQIS' licensees in the future if not enjoined by this Court.

## **COUNT I INFRINGEMENT OF U.S. PATENT NO. 9,529,768**

87. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 86 of this Complaint in support of its first cause of action as though fully set forth herein.

88. Pursuant to 35 U.S.C. § 282, the claims of the '768 patent are presumed valid.

89. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-69 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '768 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, offering to sell, and/or importing the Accused Servers.

90. Wiwynn's direct infringement of the '768 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers as set forth in

paragraphs 41-69 above, which demonstrates infringement of at least claim 13 of the '768 patent by showing:

- (a) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series are computers;
- (b) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have central processing units (CPU) with integrated interface controllers in a single chip;
- (c) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series computers have a first Low Voltage Differential Signal (LVDS) channel directly extending from the interface controller to convey address and data bits of a Peripheral Component Interconnect (PCI) bus transaction in a serial bit stream, wherein the first LVDS channel comprises first unidirectional, multiple, differential signal pairs to convey data in a first direction and second unidirectional, multiple, differential signal pairs to convey data in a second, opposite direction; and
- (d) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have system memory directly coupled to the CPU and interface controller.

91. ACQIS' infringement allegations against the Accused Servers are not limited to claim 13 of the '768 patent, and additional infringed claims will be identified through infringement contentions and discovery.

92. As early as around July 17, 2018, and at least as of the filing of this Complaint, Wiwynn had actual notice of the '768 patent and the infringement alleged herein.

93. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute induced infringement of at least claim 13 of the '768 patent pursuant to 35 U.S.C. § 271(b).

94. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute contributory infringement of at least claims 13 of the '768 patent under 35 U.S.C. § 271(c).



95. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS' licensees, and will continue to irreparable harm ACQIS and ACQIS' licensees unless enjoined.

96. ACQIS is entitled to recover all damages sustained as a result of Wiwynn's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

97. Wiwynn's infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

## **COUNT II**

### **INFRINGEMENT OF U.S. PATENT NO. 9,703,750**

98. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 97 of this Complaint in support of its second cause of action as though fully set forth herein.

99. Pursuant to 35 U.S.C. § 282, the claims of the '750 patent are presumed valid.

100. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-69 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '750 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, offering to sell, and/or importing the Accused Servers.

101. Wiwynn's direct infringement of the '750 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers as set forth in paragraphs 41-69 above, which demonstrates infringement of at least claim 4 of the '750 patent by showing:

- (a) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers are computers;
- (b) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have central processing units (CPU) with integrated interface controllers in a single chip;
- (c) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have a first Low Voltage Differential Signal (LVDS) channel directly extending from the interface controller to convey address bits, data bits, and byte enable information bits of a Peripheral Component Interconnect (PCI) bus transaction in a serial bit stream, wherein the first LVDS channel comprises a first unidirectional, differential signal pair to convey data in a first direction and a second unidirectional, differential signal pair to convey data in a second, opposite direction;
- (d) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have system memory directly coupled to the integrated central processing unit and interface controller;
- (e) the interface controller of the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series comprises Phase-Locked Loop (PLL) clock circuitry capable of generating different clock frequencies;
- (f) the interface controller of the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series configures the first LVDS channel to convey the PCI bus transaction at different data transfer rates based on the different clock frequencies generated by the PLL clock circuitry; and
- (g) and the interface controller of the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series comprises a connector adapted to convey a serial bit stream of Universal Serial Bus (USB) protocol data packets in a second Low Voltage Differential

Signal (LVDS) channel comprising two unidirectional, differential signal pairs that transmit data in opposite directions.

102. ACQIS' infringement allegations against the Accused Servers are not limited to claim 4 of the '750 patent, and additional infringed claims will be identified through infringement contentions and discovery.

103. As early as around July 17, 2018, and at least as of the filing of this Complaint, Wiwynn had actual notice of the '750 patent and the infringement alleged herein.

104. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute induced infringement of at least claim 4 of the '750 patent pursuant to 35 U.S.C. § 271(b).

105. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute contributory infringement of at least claims 4 of the '750 patent under 35 U.S.C. § 271(c).

106. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS' licensees, and will continue to irreparable harm ACQIS and ACQIS' licensees unless enjoined.

107. ACQIS is entitled to recover all damages sustained as a result of Wiwynn's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

108. Wiwynn's infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

### **COUNT III**

### **INFRINGEMENT OF U.S. PATENT NO. 8,977,797**

109. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 108 of this Complaint in support of its third cause of action as though fully set forth herein.

110. Pursuant to 35 U.S.C. § 282, the claims of the '797 patent are presumed valid.

111. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-60 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '797 patent in violation of 35 U.S.C. § 271(g) by using one or more of the methods claimed in the '797 patent to manufacture the Accused Servers and then importing, selling, offering to sell, and/or using the Accused Servers in the United States.

112. The Accused Servers made using the methods claimed in the '797 patent are not trivial or nonessential components of other products and are not materially changed by subsequent processes.

113. Wiwynn's direct infringement of the '797 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 as set forth in paragraphs 41-60 above, which demonstrate that to manufacture the WiRack 19 Server SV302G3, Wiwynn performs the following actions, which results in direct infringement of at least claim 7 of the '797 patent upon importation and/or sale of the WiRack 19 Server SV302G3 in the United States:

- (a) Wiwynn improves the storage data throughput of the WiRack 19 Server SV302G3, which is a computer;
- (b) Wiwynn connects a Central Processing Unit (CPU) directly to a peripheral bridge on a printed circuit board of the WiRack 19 Server SV302G3;
- (c) Wiwynn connects a Low Voltage Differential Signal (LVDS) channel directly to the peripheral bridge on the printed circuit board of the WiRack 19 Server SV302G3, the LVDS channel comprising two unidirectional, serial channels that transmit data in opposite directions;

- (d) Wiwynn increases data throughput of the serial channels in the WiRack 19 Server SV302G3 by providing each channel with multiple pairs of differential signal lines;
- (e) Wiwynn conveys encoded address and data bits of a Peripheral Component Interconnect (PCI) bus transaction in serial form over the serial channels of the WiRack 19 Server SV302G3 to preserve the PCI bus transaction;
- (f) Wiwynn couples the peripheral bridge of the WiRack 19 Server SV302G3 to a mass storage device through the LVDS channel; and
- (g) Wiwynn applies power to the computer system of the WiRack 19 Server SV302G3.

114. ACQIS' infringement allegations against the Accused Servers are not limited to claim 7 of the '797 patent, and additional infringed claims will be identified through infringement contentions and discovery.

115. As early as around July 17, 2018, and at least as of the filing of this Complaint, Wiwynn had actual notice of the '797 patent and the infringement alleged herein.

116. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-60, constitute induced infringement of at least claim 7 of the '797 patent pursuant to 35 U.S.C. § 271(b).

117. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-60, constitute contributory infringement of at least claim 7 of the '797 patent under 35 U.S.C. § 271(c).

118. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS' licensees, and will continue to irreparable harm ACQIS and ACQIS' licensees unless enjoined.

119. ACQIS is entitled to recover all damages sustained as a result of Wiwynn's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

120. Wiwynn's infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the

amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

**COUNT IV  
INFRINGEMENT OF U.S. PATENT NO. 8,041,873**

121. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 120 of this Complaint in support of its fourth cause of action as though fully set forth herein.

122. Pursuant to 35 U.S.C. § 282, the claims of the '873 patent are presumed valid.

123. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-69 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '873 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, offering to sell, and/or importing the Accused Servers.

124. Wiwynn's direct infringement of the '873 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers as set forth in paragraphs 41-69 above, which demonstrates infringement of at least claim 77 of the '873 patent by showing:

- (a) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series are computers;
- (b) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have processing units;
- (c) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have a main memory coupled to the processing unit;
- (d) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have a mass storage device coupled to the processing unit;

- (e) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have a low voltage differential signal (LVDS) channel comprising two sets of unidirectional, multiple serial bit channels to transmit data in opposite directions for communicating an encoded serial bit stream of Peripheral Component Interconnect (PCI) bus transaction; and
- (f) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series have a serial communication controller configured to couple to a console wherein the computer module is insertable into a slot of the console for guidance to a connector of the console for serial data communication.

125. ACQIS' infringement allegations against the Accused Servers are not limited to claim 77 of the '873 patent, and additional infringed claims will be identified through infringement contentions and discovery.

126. As early as around July 17, 2018, and at least as of the filing of this Complaint, Wiwynn had actual notice of the '873 patent and the infringement alleged herein.

127. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute induced infringement of at least claim 77 of the '873 patent pursuant to 35 U.S.C. § 271(b).

128. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute contributory infringement of at least claim 77 of the '873 patent under 35 U.S.C. § 271(c).

129. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS' licensees, and will continue to irreparable harm ACQIS and ACQIS' licensees unless enjoined.

130. ACQIS is entitled to recover all damages sustained as a result of Wiwynn's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

131. Wiwynn's infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

**COUNT V**  
**INFRINGEMENT OF RE44,468**

132. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 131 of this Complaint in support of its fifth cause of action as though fully set forth herein.

133. Pursuant to 35 U.S.C. § 282, the claims of the '468 patent are presumed valid.

134. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-69 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '436 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, offering to sell, and/or importing the Accused Servers.

135. Wiwynn's direct infringement of the '468 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series as set forth in paragraphs 41-69 above, which demonstrates infringement of at least claim 45 of the '468 patent by showing:

- (a) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers are computers;
- (b) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers have Central Processing Units (CPU) directly connected to a Low Voltage Differential Signal (LVDS) channel comprising two sets of multiple, unidirectional, serial bit channels to convey an encoded serial bit stream of encoded address and data bits of a Peripheral Component Interconnect ("PCI") bus transaction in opposite directions;



(c) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers have a main memory directly connected to the CPU; and

(d) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers have a mass storage device coupled to the CPU.

136. ACQIS' infringement allegations against the Accused Servers are not limited to claim 45 of the '468 patent, and additional infringed claims will be identified through infringement contentions and discovery.

137. As early as around July 17, 2018, and at least as of the filing of this Complaint, Wiwynn had actual notice of the '468 patent and the infringement alleged herein.

138. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute induced infringement of at least claim 45 of the '468 patent pursuant to 35 U.S.C. § 271(b).

139. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute contributory infringement of at least claim 45 of the '468 patent under 35 U.S.C. § 271(c).

140. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS' licensees, and will continue to irreparable harm ACQIS and ACQIS' licensees unless enjoined.

141. ACQIS is entitled to recover all damages sustained as a result of Wiwynn's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

142. Wiwynn's infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

**COUNT VI**  
**INFRINGEMENT OF RE44,654**

143. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 142 of this Complaint in support of its sixth cause of action as though fully set forth herein.

144. Pursuant to 35 U.S.C. § 282, the claims of the '654 patent are presumed valid.

145. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-60 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '654 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, offering to sell, and/or importing Accused Servers.

146. The Accused Servers made using the methods claimed in the '654 patent are not trivial or nonessential components of other products and are not materially changed by subsequent processes.

147. Wiwynn's direct infringement of the '654 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 as set forth in paragraphs 41-60 above, which demonstrate that to manufacture the WiRack 19 Server SV302G3, Wiwynn performs the following actions, which results in direct infringement of at least claim 14 of the '654 patent upon importation and/or sale of the WiRack 19 Server SV302G3 in the United States:

- (a) the WiRack 19 Server SV302G3 is a computer;
- (b) the WiRack 19 Server SV302G3 has a Central Processing Unit (CPU) directly connected to a peripheral bridge on a printed circuit board of a computer;
- (c) the WiRack 19 Server SV302G3 directly connects a first Low Voltage Differential Signal (LVDS) channel directly to the peripheral bridge on the printed circuit board, the first LVDS channel comprising two unidirectional, serial channels that transmit data in

opposite directions;

- (d) the WiRack 19 Server SV302G3 has a connector for the computer for connection to a console;
- (e) the WiRack 19 Server SV302G3 has a second LVDS channel to couple to the console through the connector, the second LVDS channel comprising two unidirectional, serial channels that transmit data in opposite directions;
- (f) the WiRack 19 Server SV302G3 conveys encoded address and data bits of a Peripheral Component Interconnect (PCI) bus transaction in serial form over the first LVDS channel and the second LVDS channel to preserve the PCI bus transaction; and
- (g) the WiRack 19 Server SV302G3 enables the PCI bus transaction to be conveyed serially through the second LVDS channel to the console to improve peripheral data communication speed between the computer and the console.

148. ACQIS' infringement allegations against the Accused Servers are not limited to claim 14 of the '654 patent, and additional infringed claims will be identified through infringement contentions and discovery.

149. As early as around July 17, 2018, and at least as of the filing of this Complaint, Wiwynn had actual notice of the '654 patent and the infringement alleged herein.

150. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-60, constitute induced infringement of at least claim 14 of the '654 patent pursuant to 35 U.S.C. § 271(b).

151. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-60, constitute contributory infringement of at least claim 14 of the '654 patent under 35 U.S.C. § 271(c).

152. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS' licensees, and will continue to irreparable harm ACQIS and ACQIS' licensees unless enjoined.

153. ACQIS is entitled to recover all damages sustained as a result of Wiwynn's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

154. Wiwynn's infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

## **COUNT VII INFRINGEMENT OF RE46,947**

155. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 154 of this Complaint in support of its seventh cause of action as though fully set forth herein.

156. Pursuant to 35 U.S.C. § 282, the claims of the '947 patent are presumed valid.

157. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-69 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '947 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, offering to sell, and/or importing the Accused Servers.

158. Wiwynn's direct infringement of the '947 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series as set forth in paragraphs 41-69 above, which demonstrates infringement of at least claim 54 of the '947 patent by showing:

- (a) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers are computers;
- (b) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers have a central processing unit (CPU) comprising an interface controller;

- (c) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers have a first low voltage differential signal (LVDS) channel directly extending from the interface controller, the first LVDS channel comprising two unidirectional, serial bit channels to convey data in opposite directions, wherein each serial bit channel comprises four or more differential signal pairs;
- (d) the WiRack 19 Server SV302G3 and WiRack21 Storage ST7000G2/SV7000G2 Series servers have a second LVDS channel coupled to a connector, comprising two sets of unidirectional, serial bit channels to convey data in opposite directions; and
- (e) wherein the first LVDS channel conveys an encoded serial bit stream of address and data bits of a Peripheral Component Interconnect (“PCI”) bus transaction.

159. ACQIS’ infringement allegations against the Accused Servers are not limited to claim 54 of the ’947 patent, and additional infringed claims will be identified through infringement contentions and discovery.

160. Wiwynn’s actions as alleged herein, including those alleged in paragraphs 41-69, constitute induced infringement of at least claim 54 of the ’947 patent pursuant to 35 U.S.C. § 271(b).

161. Wiwynn’s actions as alleged herein, including those alleged in paragraphs 41-69, constitute contributory infringement of at least claim 54 of the ’947 patent under 35 U.S.C. § 271(c).

162. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS’ licensees, and will continue to irreparable harm ACQIS and ACQIS’ licensees unless enjoined.

163. ACQIS is entitled to recover all damages sustained as a result of Wiwynn’s wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

164. Wiwynn’s infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the

amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

**COUNT VIII**  
**INFRINGEMENT OF U.S. PATENT NO. 7,676,624**

165. ACQIS incorporates by this reference the allegations set forth in paragraphs 1 through 164 of this Complaint in support of its eighth cause of action as though fully set forth herein.

166. Pursuant to 35 U.S.C. § 282, the claims of the '624 patent are presumed valid.

167. In view of the foregoing facts and allegations, including paragraphs 14-40 and 41-69 above, Wiwynn has directly infringed and continues to directly infringe one or more claims of the '624 patent in violation of 35 U.S.C. § 271(a) by making, using, selling, offering to sell, and/or importing the Accused Servers.

168. Wiwynn's direct infringement of the '624 patent through its manufacture, use, offers to sell, sales, and importation of the Accused Servers is shown by way of the exemplary WiRack 19 Server SV302G3 (for example, and without limitation, when combined with the WiRack 19 SR2000G2 Series) and the WiRack21 Storage ST7000G2/SV7000G2 Series (for example, and without limitation, when combined with the WiRack 21 SR1000G2 Series) as set forth in paragraphs 41-69 above, which demonstrates infringement of at least claim 11 of the '624 patent by showing:

- (a) The WiRack 19 Server SV302G3 (for example, and without limitation, when combined with the WiRack 19 SR2000G2 Series) and the WiRack21 Storage ST7000G2/SV7000G2 Series (for example, and without limitation, when combined with the WiRack 21 SR1000G2 Series) Series servers are a computer system;
- (b) the WiRack 19 Server SV302G3 (for example, and without limitation, when combined with the WiRack 19 SR2000G2 Series) and the WiRack21 Storage ST7000G2/SV7000G2 Series (for example, and without limitation, when combined with



the WiRack 21 SR1000G2 Series) servers comprise a console comprising a first coupling site and a second coupling site, each coupling site comprising a connector; the console being an enclosure housing each coupling site;

- (c) the WiRack 19 Server SV302G3 (for example, and without limitation, when combined with the WiRack 19 SR2000G2 Series) and the WiRack21 Storage ST7000G2/SV7000G2 Series (for example, and without limitation, when combined with the WiRack 21 SR1000G2 Series) servers comprise a plurality of computer modules, each computer module coupled to one of the coupling sites through the connector, and comprising a processing unit, a main memory coupled to the processing unit;
- (d) the WiRack 19 Server SV302G3 (for example, and without limitation, when combined with the WiRack 19 SR2000G2 Series) and the WiRack21 Storage ST7000G2/SV7000G2 Series (for example, and without limitation, when combined with the WiRack 21 SR1000G2 Series) servers each comprise an interface controller coupled to a differential signal channel comprises two sets of unidirectional low voltage serial bit channels in opposite directions transmitting encoded PCI bus transaction data;
- (e) wherein each of the computer modules of the WiRack 19 Server SV302G3 (for example, and without limitation, when combined with the WiRack 19 SR2000G2 Series) and the WiRack21 Storage ST7000G2/SV7000G2 Series (for example, and without limitation, when combined with the WiRack 21 SR1000G2 Series) operates fully independent of each other; and
- (f) wherein the interface controller couples to the console of the WiRack 19 Server SV302G3 (for example, and without limitation, when combined with the WiRack 19 SR2000G2 Series) and the WiRack21 Storage ST7000G2/SV7000G2 Series (for example, and without limitation, when combined with the WiRack 21 SR1000G2 Series) through the

differential signal channel for data communication, through the connector of the coupling site.

169. ACQIS' infringement allegations against the Accused Servers are not limited to claim 11 of the '624 patent, and additional infringed claims will be identified through infringement contentions and discovery.

170. As early as around July 17, 2018, and at least as of the filing of this Complaint, Wiwynn had actual notice of the '624 patent and the infringement alleged herein.

171. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute induced infringement of at least claim 6 of the '624 patent pursuant to 35 U.S.C. § 271(b).

172. Wiwynn's actions as alleged herein, including those alleged in paragraphs 41-69, constitute contributory infringement of at least claim 6 of the '624 patent under 35 U.S.C. § 271(c).

173. The above-described acts of direct and induced infringement committed by Wiwynn have irreparably harmed ACQIS and ACQIS' licensees, and will continue to irreparable harm ACQIS and ACQIS' licensees unless enjoined.

174. ACQIS is entitled to recover all damages sustained as a result of Wiwynn's wrongful acts of infringement, but in no event less than a reasonable royalty pursuant to 35 U.S.C. § 284.

175. Wiwynn's infringement as described herein has been and continues to be willful and exceptional. Accordingly, ACQIS is entitled to recover enhanced damages up to three times the amount found or assessed at trial pursuant to 35 U.S.C. § 284, as well as its attorneys' fees pursuant to 35 U.S.C. § 285.

### **JURY TRIAL DEMANDED**

ACQIS LLC, hereby demands a trial by jury on all claims and issues so triable.

## **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff ACQIS LLC respectfully requests that this Court grant the following relief to ACQIS LLC:

A. enter judgment that Wiwynn has infringed, both directly and indirectly, one or more claims of each of the ACQIS Patents and continues to infringe those claims through (1) the manufacture, use, offering to sale, and/or sale in the United States, and/or the importation into the United States, of infringing computer products; (2) the practice of claimed methods of the ACQIS Patents by using and/or testing computer products in the United States; (3) the importation into the United States of computer products made abroad using ACQIS's patented processes; and (4) the inducement of third parties to engage in, and/or contributing to the engagement of third parties in, the activity described above with knowledge of the ACQIS Patents and of the third parties' infringing actions;

B. enter judgment that such infringement is willful;

C. enter judgment awarding ACQIS monetary relief pursuant to 35 U.S.C. § 284 in an amount adequate to compensate for Wiwynn's infringement of the ACQIS Patents to be determined at trial, but not less than a reasonable royalty, awarding ACQIS all pre- and post-judgment interest and costs, and awarding ACQIS enhanced damages for Wiwynn's willful infringement of the ACQIS Patents;

D. enter an order that Wiwynn pay to ACQIS ongoing royalties in an amount to be determined for any infringement occurring after the date that judgment is entered;

E. enter an order, pursuant to 35 U.S.C. § 285, declaring this an exceptional case and awarding to ACQIS its reasonable attorneys' fees; and

F. enter an order awarding to ACQIS such other and further relief, whether at law or in equity, that this Court seems just, equitable, and proper.

Dated: October 15, 2020

Respectfully submitted,

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